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| 10/594,319 | 04/03/2007 | Anthony L. Smith | 032968-0133 | 2135 |
| 22428 7590 05/11/2010 FOLEY AND LARDNER LLP SUITE 500 3000 K STREET NW WASHINGTON, DC 20007 | | | | |
| EXAMINER | | | | |
| CHAU, TERRY C | | | | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/594,319

Applicant(s)

SMITH ET AL.

Examiner

TERRY CHAU

Art Unit

3655

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 3/18/2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-48 is/are pending in the application.
- 4a) Of the above claim(s) 5-48 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 9/27/2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/226)
Paper No(s)/Mail Date 8/27/2006
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

This is the first office action on the merits for application 10/594,319 filed 4/3/2007.

Claims 1-48 are currently pending. Claims 5-48 are withdrawn from further consideration as being drawn to non-elected Invention.

Election/Restrictions

Applicant's election without traverse of Invention 1 in the reply filed on 3/18/2010 is acknowledged.

Claims 5-48 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to nonelected inventions there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 3/18/2010

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Information Disclosure Statement

The information disclosure statement (IDS) submitted on 8/27/2006 has been considered by the examiner.

The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered. For example, US 4,788,885 is referenced in paragraph 0081 but is not listed on an IDS.

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "second end" of claims 1 and 2 and the "labyrinth seal" of claim 2 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: second end 54c from paragraph 0077.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 56c in figure 1.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate

prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

The disclosure is objected to because of the following informalities:

In paragraph 0077, the applicant discloses a labyrinth seal path 54a with a first end 54b and second end 54c. Firstly, it is noted that the second end does not appear to be shown in the drawings. Secondly, it is unclear how "lubricant which leaks into one end of the labyrinth seal path 54a will exit the other end back into reservoir 16" as per paragraph 0077.

Appropriate correction is required. New matter should be avoided.

The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is

requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-4 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Regarding claims 1 and 2 is it unclear from the applicant's disclosure how lubricant may enter the labyrinth seal path or how the lubricant is returned to the fluid reservoir. See the objection to the specification above. It is also unclear from the applicant's disclosure what the second end is. See objection to the drawings above.

Claims 3-4 are rejected as being dependent upon rejected claim 2.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2-4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Where applicant acts as his or her own lexicographer to specifically define a term of a claim contrary to its ordinary meaning, the written description must clearly redefine the claim term and set forth the uncommon definition so as to put one reasonably skilled in the art on notice that the applicant intended to so redefine that claim term. *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed. Cir. 1999). The term "labyrinth seal" in claim 2 is appears to be used by the claim to mean "a labyrinth seal path", while the accepted meaning of a labyrinth seal is a dynamic seal with tortuous grooves to retain fluids. For example, see US 2,587,007. In a labyrinth / dynamic seal, the seal prevents fluid from leaking between two relatively rotating parts. This does not appear to be the case in the applicant's invention. The term is indefinite because the specification does not clearly redefine the term.

Claim 2 recites the limitation "labyrinth path" in line 13. There is insufficient antecedent basis for this limitation in the claim.

Claims 3 and 4 are rejected as being dependent upon rejected claim 2.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

As best understood, claims 1-4 are rejected under 35 U.S.C. 102(a) as being anticipated by Smith et al. (US 6,585,092).

Smith et al. discloses:

Regarding claim 1:

A viscous fluid clutch (see figure 1) comprising:

a housing (31, 40) including a first housing portion (40) cast around an annular housing insert (42) and a second housing portion (31) connected to the first housing portion and defining a fluid reservoir (86) contained by the first and second housing portions; and

a labyrinth seal path (seal path between 48 and 40) formed between the housing insert and the first housing portion and having a first end (radially outer end of seal path?) and a second end (radially inner end of seal path?) such that any fluid entering the labyrinth seal path is returned to the fluid reservoir between the first and second housing portions.

It is assumed that the labyrinth seal path includes the two ends and functions as per the claimed invention as the applicant incorporate by reference the teachings of Smith et al. See paragraph 0073. Also see MPEP 2112 III.

Regarding claim 2:

A viscous fluid clutch (see figure 1), comprising:

an input shaft (12);

a rotor assembly (16, 18) connected to the input shaft;

an annular housing insert (42);

a coil assembly (44) operatively connected to the housing insert;

a housing (31, 40) including a first housing portion (40) cast around the housing insert and a second housing (31) portion connected for rotation with the first housing portion and rotatably disposed on the input shaft; and

a fluid reservoir (86) disposed between the first housing portion and the second housing portion,

wherein the first housing portion and the housing insert form there between a labyrinth seal *path* (seal path between 48 and 40) having a first end (radially outer end of seal path?) and a second end (radially inner end of seal path?) wherein each of the first end and the second end of the labyrinth path communicate with the fluid reservoir such that any fluid entering the labyrinth seal *path* is returned to the fluid reservoir.

It is assumed that the labyrinth seal path includes the two ends and functions as per the claimed invention as the applicant incorporate by reference the teachings of Smith et al. See paragraph 0073. Also see MPEP 2112 III.

Regarding claim 3, the first end of the labyrinth seal is located toward an outer radial end of the rotor and the second end is located toward a central portion of the coil assembly.

Regarding claim 4, the housing insert includes an annular locking extension portion (176) for interlocking the housing insert and the first housing portion.

As best understood, claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Moser et al. (US 5,960,918).

Moser et al. discloses:

Regarding claim 1:

A viscous fluid clutch (see figure 1) comprising:

a housing (16, 18, 20) including a first housing portion (18, 20) cast around an annular housing insert (80, 84; "cast" is broadly interpreted to mean formed) and a second housing portion (16) connected to the first housing portion and defining a fluid reservoir (72) contained by the first and second housing portions; and

a labyrinth seal path (path between 80 and 20; and 84 and 20) formed between the housing insert and the first housing portion and having a first end (radially outer end of seal path?) and a second end (radially inner end of seal path?) such that any fluid entering the labyrinth seal path is returned to the fluid reservoir between the first and second housing portions.

Regarding claim 2:

A viscous fluid clutch (see figure 1), comprising:

an input shaft (30);

a rotor assembly (36, 38) connected to the input shaft;

an annular housing insert (80, 84);

a coil assembly (82) operatively connected to the housing insert;

a housing (16, 18, 20) including a first housing portion (18, 20) cast around the housing insert and a second housing (16) portion connected for rotation with the first housing portion and rotatably disposed on the input shaft; and

a fluid reservoir (72) disposed between the first housing portion and the second housing portion,

wherein the first housing portion and the housing insert form there between a labyrinth seal *path* (path between 80 and 20; and 84 and 20) having a first end (radially outer end of seal path?) and a second end (radially inner end of seal path?) wherein each of the first end and the second end of the labyrinth path communicate with the fluid reservoir such that any fluid entering the labyrinth seal *path* is returned to the fluid reservoir.

Regarding claim 3, the first end of the labyrinth seal is located toward an outer radial end of the rotor and the second end is located toward a central portion of the coil assembly.

Regarding claim 4, the housing insert includes an annular locking extension portion (leftmost annular portion of 84 which projects beyond the leftmost surface of 80) for interlocking the housing insert and the first housing portion.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Winther (US 2,587,077) discloses a labyrinth seal.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TERRY CHAU whose telephone number is (571) 270-5926. The examiner can normally be reached on Monday-Friday 9:30am-6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Siconolfi can be reached on (571) 272-7124. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/TERRY CHAU/
Examiner, Art Unit 3655

/David D. Le/
Primary Examiner, Art Unit 3655
05/10/2010

